



Docket No.: SON-2196
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Shinji Negishi, et al.

Application No.: 09/931,577

Conf. # 2196

Filed: August 17, 2001

Art Unit: 2623

For: DATA TRANSMISSION SYSTEM, DATA
TRANSMITTING APPARATUS AND
METHOD, AND SCENE DESCRIPTION UNIT
AND METHOD

Examiner: Peter C. Wilder

APPELLANT'S BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Madam:

This is in response to the Notification of Non-Compliant Appeal Brief (37 CFR 41.37) dated June 17, 2009.

This is an Appeal Brief under 37 C.F.R. §41.37 appealing the final decision of the Examiner dated April 30, 2008. Each of the topics required by 37 C.F.R. §41.37 is presented herewith and is labeled appropriately. This brief is in furtherance of the Final Office Action of April 30, 2008.

A Notice of Appeal was filed in this case on July 30, 2008, along with a Request for Panel Review. The Notice of Panel Decision from Pre-Appeal Brief Review dated December 16, 2008 ("the Decision") indicates that all claims pending remain rejected.

The Decision further indicates that the extendable time period for the filing of the Appellant's Brief will be reset to be one month from the mailing of the Decision. Accordingly, the filing of this Appellant's Brief is timely. 37 C.F.R. §1.136.

I. REAL PARTY IN INTEREST

Sony Corporation of Tokyo, Japan ("Sony") is the real party in interest of the present application. An assignment of all rights in the present application to Sony was executed by the inventor and recorded by the U.S. Patent and Trademark Office at reel 012332, frame 0691.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Within the Final Office Action of April 30, 2008:

Page 2 includes a rejection of claims 27-30, 32-39, and 95-104 under 35 U.S.C. § 102 as unpatentable over U.S. Patent No. 5,953,506 to Kalra et al. ("Kalra").

Page 8 includes a rejection of claims 1, 14, 27-30, 32-43, 45, 46, 48-52, 78, 105-115 under 35 U.S.C. § 103 over Kalra in view of The Background Of The Invention section of the specification for the present application ("AAPA").

Thus, the status of the claims is as follows:

Rejected: Claim 1

Canceled: Claims 2-13

Rejected: Claim 14

Canceled: Claims 15-26

Rejected: Claims 27-30

Canceled: Claims 31

Rejected: Claims 32-43

Canceled: Claims 44

Rejected: Claims 45-46

Canceled: Claims 47

Rejected: Claims 48-52

Canceled: Claims 53-77

Rejected: Claims 78

Canceled: Claims 79-94

Rejected: Claims 95-109

Canceled: Claims 110-115

Rejected: Claims 116-120

No claims are indicated within the Final Office Action to contain allowable subject matter.

Accordingly, Appellant hereby appeals the rejection of claims 1, 14, 27-30, 32-43, 45-46, 48-52, 78, 95-109, 116-120 which are presented in the Claims Appendix.

IV. STATUS OF AMENDMENTS

Provided is a statement of the status of any amendment filed subsequent to final rejection.

Subsequent to the final rejection of April 30, 2008, a Second Amendment After Final Action Under 37 C.F.R. 1.116 was filed on January 8, 2009.

The Advisory Action dated February 3, 2009 indicates the entry of the Second Amendment.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The following description is provided for illustrative purposes and is not intended to limit the scope of the invention.

Claim 1 is drawn to a data transmission system comprising:	
a transmitting apparatus that transmits a scene description; and	Fig. 1, el. 10; p. 18, l. 24
a receiving apparatus that constructs a scene according to the scene description;	Fig. 1, el. 20; p. 19, l. 1
wherein the transmitting apparatus comprises:	
an elementary stream (ES) processing means that transfers at least one ES, which conforms to at least one of a transmission line state and a request issued from the receiving apparatus,	Fig. 1, el. 3; p. 19, ll. 8-12; p.22, l. 17 – p. 23, l. 2
a scene description processing means that transfers and modifies a scene description to conform to a corresponding quality of the at least one ES from the ES processing means by adjusting the properties assigned to the ES within the scene description, and	Fig. 1, el. 2; p. 24, ll. 12-15
wherein the transmitting apparatus appends time information to the at least one ES and the scene description; and	p. 21, ll. 11-15
wherein the receiving apparatus monitors the time information sent from the transmitting apparatus and detects a delay in transmission using the time information.	p. 21, ll. 15-19

Claim 14 is drawn to a data transmitting method for transmitting a scene description that describes at least one elementary stream (ES) used to construct a scene, and constructing the scene according to the scene description, comprising:	p. 18, l. 19 – p.19, l. 5
transmitting at least one ES, which conforms to at least one of a transmission line state and a request issued from the receiving side;	p.22, l. 17 – p. 23, l. 2
transmitting a scene description that conforms to the at least one ES;	p. 24, ll. 12-15
appending time information to the transmitted scene description; and	p. 21, ll. 11-15
monitoring the time information to detect delays in transmission using the time information.	p. 21, ll. 15-19

Claim 27 is drawn to a data transmitting apparatus for transmitting a scene description that describes at least one elementary stream (ES) used to construct a scene, comprising:	Fig. 1, el. 10; p. 18, l. 24
an ES processing means that transfers at least one ES, which conforms to at least one of a transmission line state and a request issued from a receiving side;	Fig. 1, el. 3; p. 19, ll. 8-12
a scene description processing means for transferring and modifying a scene description, in accordance with the at least one ES from the ES processing means, by adjusting the properties assigned to the ES within the scene description.	Fig. 1, el. 2; p. 24, ll. 12-15

Claim 33 is drawn to a data transmitting apparatus according to Claim 27, further comprising:	
wherein the scene description processing means transfers a scene description that specifies whether the at least one ES is to be used to construct a scene are used or not.	p. 38-39

Claim 34 is drawn to a data transmitting apparatus according to Claim 27, wherein the scene description processing means transfers a scene description whose complexity conforms to the at least one ES.	p. 38-39
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Claim 40 is drawn to a data transmitting method for transmitting a scene description that describes the properties of at least one elementary stream (ES) used to construct a scene, comprising:	p. 18, l. 19 – p.19, l. 5
transmitting at least one ES, which conforms to at least one of a transmission line state and a request issued from the receiving side;	p.22, l. 17 – p. 23, l. 2
transmitting a scene description in accordance with the corresponding quality of the at least one ES;	p. 24, ll. 12-15
appending time information to at least one of the transmitted scene description and the at least one ES.	p. 21, ll. 11-15

Claim 46 a data transmitting method according to Claim 40, wherein the scene description specifies whether to use the at least one ES.	p. 38-39
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Claim 78 is drawn to a data transmission system comprising:	
a transmitting apparatus that transmits a scene description; and	Fig. 1, el. 10; p. 18, l. 24
a receiving apparatus that constructs a scene according to the scene description;	Fig. 1, el. 20; p. 19, l. 1
wherein the transmitting apparatus comprises:	
a elementary signal (ES) processor that transfers at least one ES used to construct the scene, in accordance to the transmission capacity, and	Fig. 1, el. 3; p. 19, ll. 8-12; p.22, l. 17 – p. 23, l. 2

Claim 78 (cont')	
a scene description processor that transmits a scene description and a time information, the scene description conforming to a transmission capacity, the transmission capacity being derived from at least one of a transmission line state, a request issued from the receiving apparatus, or known available resources of the receiving apparatus;	Fig. 1, el. 2; p. 24, ll. 12-15; p. 21, l. 25 – p. 22, l. 16
wherein the receiving apparatus monitors the time information sent from the transmitting apparatus to detect a delay in the transmission; and	p. 21, ll. 11-15
wherein the scene description includes objects, the objects comprising at least one node and at least one signal used to construct the scene, each the node describing an object or a relationship between objects.	p. 21, ll. 15-19
Claim 95 is drawn to a data receiving apparatus for receiving a scene description that describes at least one elementary stream (ES) used to construct a scene, comprising:	Fig. 1, el. 20; p. 19, l. 1;
an ES decoding unit that receives at least one ES, which conforms to at least one of a transmission line state and a request issued from the data receiving apparatus;	Fig. 1, el. 24; p.22, l. 17 – p. 23, l. 2
a scene description decoding unit for constructing a scene description, in which the properties assigned to the ES within the scene description conform to the at least one ES.	Fig. 1, el. 23; p. 24, ll. 12-15
Claim 98 is drawn to a data receiving apparatus according to Claim 95, wherein the scene description specifies whether the at least one ES is to be used to construct the scene.	p. 38-39
Claim 99 is drawn to a data receiving apparatus according to Claim 95, wherein the scene description complexity conforms to the at least one ES.	p. 38-39
Claim 105 is drawn to a data receiving method for receiving a scene description that describes the properties of at least one elementary stream (ES) used to construct a scene, comprising:	Fig. 1, el. 20; p. 19, l. 1
receiving at least one ES, which conforms to at least one of a transmission line state and a request issued from a receiving side;	p.22, l. 17 – p. 23, l. 2
receiving a scene description in accordance with the corresponding quality of the at least one ES;	p. 24, ll. 12-15
wherein time information is appended to at least one of the received scene description and the at least one ES.	p. 21, ll. 11-15

Claim 109 is drawn to a data receiving method according to Claim 105, wherein the scene description specifies whether to use the at least one ES.	p. 38-39
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VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues presented for consideration in this appeal are as follows:

Whether the Examiner erred in rejecting claims 27-30, 32-39, and 95-104 under 35 U.S.C. § 102 as unpatentable over U.S. Patent No. 5,953,506 to Kalra et al. ("Kalra").

Whether the Examiner erred in rejecting claims 1, 14, 27-30, 32-43, 45, 46, 48-52, 78, 105-115 under 35 U.S.C. § 103 over Kalra in view of The Background Of The Invention section of the specification for the present application ("AAPA").

These issues will be discussed hereinbelow.

VII. ARGUMENT

In the Final Office Action of April 30, 2008:

The Examiner erred in rejecting claims 27-30, 32-39, and 95-104 under 35 U.S.C. § 102 as unpatentable over U.S. Patent No. 5,953,506 to Kalra et al. ("Kalra").

The Examiner erred in rejecting claims 1, 14, 27-30, 32-43, 45, 46, 48-52, 78, 105-115 under 35 U.S.C. § 103 over Kalra in view of The Background Of The Invention section of the specification for the present application ("AAPA").

For at least the following reasons, Appellant submits that this rejection is both technically and legally unsound and should therefore be reversed.

For purposes of this appeal brief only, and without conceding the teachings of any prior art reference, the claims have been grouped as indicated below.

1. The Examiner erred in rejecting claims 27-30, 32-39, and 95-104 under 35 U.S.C. § 102 as unpatentable over U.S. Patent No. 5,953,506 to Kalra et al. ("Kalra").

Claims 27-30, 32, 35-39 - Claims 28-30, 32, 34-39 are dependent upon claim 27.

Claim 27 is drawn to a data transmitting apparatus for transmitting a scene description that describes at least one elementary stream (ES) used to construct a scene, comprising:

an ES processing means that transfers at least one ES, which conforms to at least one of a transmission line state and a request issued from a receiving side;

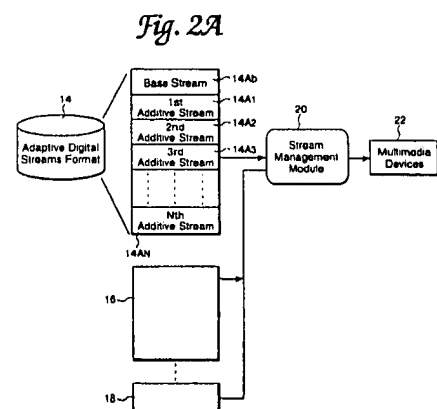
a scene description processing means for transferring and modifying a scene description, in accordance with the at least one ES from the ES processing means, by adjusting the properties assigned to the ES within the scene description.

Kalra - Fig. 2A of Kalra illustrates a Scalable Media Delivery System.

Kalra discloses a system adapted to adjust a media stream transmitted to a client based on a client profile, which may include data relating to the client's data bandwidth and processing capabilities.

Element 14A, in Fig. 2A, illustrates an Adaptive Digital Stream. Fig. 1 illustrates that this adaptive stream is produced by transcoder 10 from a Standard Digital Media 12.

The Adaptive Digital Stream 14 includes a Basic Stream 14Ab having the essential portions of the data, and a series of Additive Streams 14A1-14AN which augment the Basic Stream 14Ab and are made available to the client based on the client profile.



The media streams may include 3D, audio, or video streams tailored based on the client profile. Standard Digital Media 12 will generally be MPEG data, while the 3D stream is generally modified VRML.

With respect to claim 27, Kalra fails to teach or suggest “*an ES processing means that transfers at least one ES, which conforms to at least one of a transmission line state and a request issued from a receiving side [and] a scene description processing means for transferring and modifying a scene description, in accordance with the at least one ES from the ES processing means, by adjusting the properties assigned to the ES within the scene description...*”

Claim 27 discloses a transmitting apparatus having an elementary stream (ES) processing means and a scene description processing means. The elementary stream (ES) processing means “*transfers at least one ES, which conforms to at least one of a transmission line state and a request issued from a receiving side.*” The scene description processing means “*transfer[s] and modif[ies] a scene description, in accordance with the at least one ES from the ES processing means, by adjusting the properties assigned to the ES within the scene description.*” As such, the claims distinguish the elementary stream from the scene description, in that the scene description is modified “*by adjusting the properties assigned to the ES within the scene description.*”

In rejecting the ES processing means the Final Office Action recites:

- a scene description processing means that transfers and modifies a scene description to conform to a corresponding quality of the at least one ES from the ES processing means by adjusting the properties assigned to the ES within the scene description (col. 19, l. 47-64; col. 21, l. 61-67; col. 22, l. 37-53; & Fig. 17).

The cited portion of Kalra, from column 19-22 refers to the modifications made to a VRML format to create an adaptive stream (see Fig. 1).

Columns 19-22 discuss how a 3D media stream originates as a single VRML media and is converted into a 3-D Adaptive Media Stream by the flowchart process shown in Fig. 17.

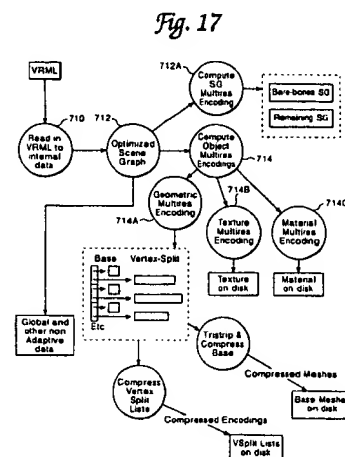
Particularly evident is the lack of *separate elementary streams and scene descriptions*. This is because the Office Action argues that these are the same object, ie., the VRML format.

In setting forth the argument that claim 1 is obviated by Kalra, the Office Action mistakenly attempts to imply that the VRML format is separate from the adaptive media stream, whereas columns 19-22 explain that the VRML format becomes the Adaptive Media Stream.

This is further illustrated in Fig. 17, which shows a flowchart of the transcoding process for converting a VRML format into an adaptive stream format, furthering the process illustrated in Fig. 1. While Kalra does discuss compression of the VRML format, Kalra fails to disclose that both elementary streams and a scene description.

The claim recites “a scene description processing means that transfers and modifies a scene description to conform to a corresponding quality of the at least one ES [] by adjusting the properties assigned to the ES within the scene description.” This language distinguished the scene description from the media stream and identifies the media stream as having properties assigned to it within the scene description. As such, two pieces of data (i) the elementary stream and (ii) the scene description are recited.

This relationship is wholly absent in Kalra, where in columns 19-22, the VRML media is the media stream being modified. There is no second object being modified to account for the modified VRML data, and the VRML data is not modified to adjust the properties of another media stream.



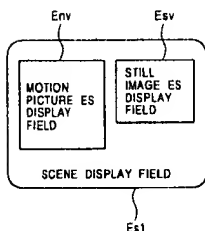
Instead, the VRML is modified to match a user profile. This is similar to the earlier portions of Kalra that discuss modifying an MPEG video stream based on the client profile.

No where does Kalra identify separate elements comparable to the scene description and ES.

Furthermore, even if Kalra suggests both a scene description and the corresponding ESes, Kalra still fails to teach or suggest a *“scene description processing means [that]... modif[ies] a scene description, in accordance with the at least one ES from the ES processing means, by adjusting the properties assigned to the ES within the scene description.”*

While Kalra recognizes the need to optimize and compress information transmitted from a server to a client. Kalra fails to recognize that the compression and reduction in data may require that the scene (or layout) of the data be modified to provide the user with a consistent and functional viewing experience.

FIG. 2



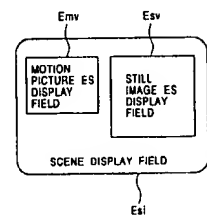
By example, Figs. 2 and 4 of the present application illustrate how the scene description is modified to account for changes in the ES.

Fig. 2 (left) illustrates an unadjusted scene Es1 having two ESes (Env and Esv).

Fig. 4 illustrates the same scene having been

adjusted for a low bandwidth transmission. To compensate for the low bandwidth, Env (video content) size was reduced, and Esv (still image content) was increased in size to account for the extra space left by the reduced Env.

FIG. 4



Similarly, the scene description was modified to shift the position of Env and Esv to account for their changed size; in Fig. 4, Esv is provided with a larger view area beginning at a location that is shifted left from where it is in Fig. 2, and Env is allocated a smaller portion of the screen to prevent stretching of the video content.

By distinction, when Kalra downgrades or upgrades the quality of video or image content within a Media Stream, Kalra does not modify the placement of the video or image content to account for changes in the quality of the video or image content. Kalra simply compresses this information in place. By contrast, claim 27 recites “*adjusting the properties assigned to the ES within the scene description,*” thereby recognizing that the scene description is adjusted to account for the changes to the ES.

Claim 33 - Claim 33 is drawn to a data transmitting apparatus according to Claim 27, further comprising:

wherein the scene description processing means transfers a scene description that specifies whether the at least one ES is to be used to construct a scene are used or not.

Kalra - Kalra does not teach or suggest “wherein the scene description processing means transfers a scene description that specifies whether the at least one ES is to be used to construct a scene are used or not.”

The Office Action cites to columns 21-22 of Kalra as the basis for rejecting claim 33.

However, as before, this rejection fails to distinguish between the scene description and the elementary stream. Columns 21-22 discuss the process by which the VRML media becomes an Adaptive Media Stream.

This adaptive stream data allows for a reduced data stream to be sent to the client.

However, Kalra is deficient with respect to the “scene description.”

That is, there is no scene description that is separate from the media stream, that is sent to the client or that is modified based on the media stream.

Furthermore, there is no component of the VRML format that shows a situation where a stream is simply removed from the VRML. As illustrated in Fig. 17 of Kalra, content is compressed for different transfer states, but not removed.

Claim 34 is drawn to a data transmitting apparatus according to Claim 27, wherein the scene description processing means transfers a scene description whose complexity conforms to the at least one ES.

Kalra - Kalra does not teach or suggest that “*the scene description processing means transfers a scene description whose complexity conforms to the at least one ES.*”

That is, Kalra does not tie that complexity of the scene description to the ES. While Kalra discloses adjusting the resolution of the various components of the VRML data to conform to a transmission capacity, Kalra does not recognize the benefit of changing a scene description based on the changes to the ESes within the scene.

Claims 95-98, 100-104 - Claims 96-98, 100-104 are dependent upon claim 95. Claim 95 is drawn to a data receiving apparatus for receiving a scene description that describes at least one elementary stream (ES) used to construct a scene, comprising:

an ES decoding unit that receives at least one ES, which conforms to at least one of a transmission line state and a request issued from the data receiving apparatus;

a scene description decoding unit for constructing a scene description, in which the properties assigned to the ES within the scene description conform to the at least one ES.

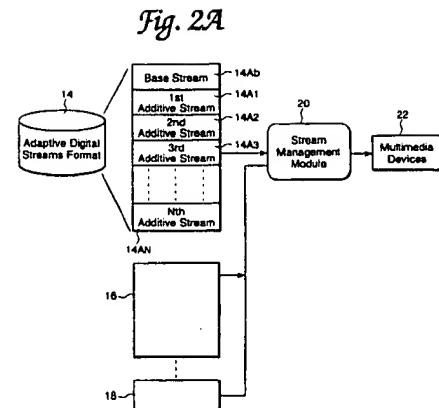
Kalra - Fig. 2A of Kalra illustrates a Scalable Media Delivery System.

Kalra discloses a system adapted to adjust a media stream transmitted to a client based on a client profile, which may include data relating to the client's data bandwidth and processing capabilities.

Element 14A, in Fig. 2A, illustrates an Adaptive Digital Stream. Fig. 1 illustrates that this adaptive stream is produced by transcoder 10 from a Standard Digital Media 12.

The Adaptive Digital Stream 14 includes a Basic Stream 14Ab having the essential portions of the data, and a series of Additive Streams 14A1-14AN which augment the Basic Stream 14Ab and are made available to the client based on the client profile.

The media streams may include 3D, audio, or video streams tailored based on the client profile. Standard Digital Media 12 will generally be MPEG data, while the 3D stream is generally modified VRML.



In rejecting the ES processing means the Final Office Action recites:

- a scene description processing means that transfers and modifies a scene description to conform to a corresponding quality of the at least one ES from the ES processing means by adjusting the properties assigned to the ES within the scene description (col. 19, l. 47-64; col. 21, l. 61-67; col. 22, l. 37-53; & Fig. 17).

The cited portion of Kalra, from column 19-22 refers to the modifications made to a VRML format to create an adaptive stream (see Fig. 1).

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Particularly evident is the lack of *separate elementary streams and scene descriptions*. This is because the Office Action argues that these are the same object, ie., the VRML format.

In setting forth the argument that claim 1 is obviated by Kalra, the Office Action mistakenly attempts to imply that the VRML format is separate from the adaptive media stream, whereas columns 19-22 explain that the VRML format becomes the Adaptive Media Stream.

This is further illustrated in Fig. 17, which shows a flowchart of the transcoding process for converting a VRML format into an adaptive stream format, furthering the process illustrated in Fig. 1.

While Kalra does discuss compression of the VRML format, Kalra fails to disclose that both elementary streams and a scene description.

The claim recites “*a scene description processing means that transfers and modifies a scene description to conform to a corresponding quality of the at least one ES [] by adjusting the properties assigned to the ES within the scene description.*”

This language distinguished the scene description from the media stream and identifies the media stream as having properties assigned to it within the scene description.

As such, two pieces of data (i) the elementary stream and (ii) the scene description are recited.

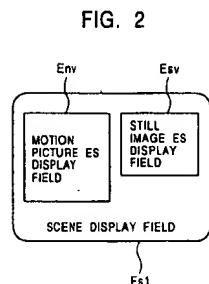
This relationship is wholly absent in Kalra, where in columns 19-22, the VRML media is the media stream being modified. There is no second object being modified to account for the modified VRML data, and the VRML data is not modified to adjust the properties of another media stream.

Instead, the VRML is modified to match a user profile. This is similar to the earlier portions of Kalra that discuss modifying an MPEG video stream based on the client profile.

No where does Kalra identify separate elements comparable to the scene description and ES.

Furthermore, even if Kalra suggests both a scene description and the corresponding ESes, Kalra still fails to teach or suggest a “*scene description processing means [that]... modif[ies] a scene description, in accordance with the at least one ES from the ES processing means, by adjusting the properties assigned to the ES within the scene description.*”

While Kalra recognizes the need to optimize and compress information transmitted from a server to a client, Kalra fails to recognize that the compression and reduction in data may require that the scene (or layout) of the data be modified to provide the user with a consistent and functional viewing experience.



By example, Figs. 2 and 4 of the present application illustrate how the scene description is modified to account for changes in the ES.

Fig. 2 (left) illustrates an unadjusted scene Es1 having two ESes (Env and Esv).

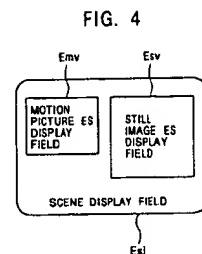


Fig. 4 illustrates the same scene having been adjusted for a low bandwidth transmission. To compensate for the low bandwidth, Env (video content) size was reduced, and Esv (still image content) was increased in size to account for the extra space left by the reduced Env.

Similarly, the scene description was modified to shift the position of Env and Esv to account for their changed size; in Fig. 4, Esv is provided with a larger view area beginning at a location that is shifted left from where it is in Fig. 2, and Env is allocated a smaller portion of the screen to prevent stretching of the video content.

By distinction, when Kalra downgrades or upgrades the quality of video or image content within a Media Stream, Kalra does not modify the placement of the video or image content to account for changes in the quality of the video or image content. Kalra simply compresses this information in place.

Claim 98 - Claim 98 is drawn to a data receiving apparatus according to Claim 95, wherein the scene description specifies whether the at least one ES is to be used to construct the scene.

Kalra - Kalra does not teach or suggest “wherein the scene description processing means transfers a scene description that specifies whether the at least one ES is to be used to construct a scene are used or not.”

The Office Action cites to columns 21-22 of Kalra as the basis for rejecting claim 33.

However, as before, this rejection fails to distinguish between the scene description and the elementary stream. Columns 21-22 discuss the process by which the VRML media becomes an Adaptive Media Stream.

This adaptive stream data allows for a reduced data stream to be sent to the client.

However, Kalra is deficient with respect to the “scene description.”

That is, there is no scene description that is separate from the media stream, that is sent to the client or that is modified based on the media stream.

Furthermore, there is no component of the VRML format that shows a situation where a stream is simply removed from the VRML. As illustrated in Fig. 17 of Kalra, content is compressed for different transfer states, but not removed.

Claim 99 - Claim 99 is drawn to a data receiving apparatus according to Claim 95, wherein the scene description complexity conforms to the at least one ES.

Kalra - Kalra does not teach or suggest that “*the scene description processing means transfers a scene description whose complexity conforms to the at least one ES.*”

That is, Kalra does not tie that complexity of the scene description to the ES. While Kalra discloses adjusting the resolution of the various components of the VRML data to conform to a transmission capacity, Kalra does not recognize the benefit of changing a scene description based on the changes to the ESes within the scene.

2. The Examiner erred in rejecting claims 1, 14, 27-30, 32-43, 45, 46, 48-52, 78, 105-115 under 35 U.S.C. § 103 over Kalra in view of The Background Of The Invention section of the specification for the present application (“AAPA”).

Kalra - At least for the reasons provided hereinabove, Kalra fails to disclose, teach, or suggest all claimed features.

In addition:

Claim 1 - Claim 1 is drawn to a data transmission system comprising:

a transmitting apparatus that transmits a scene description; and

a receiving apparatus that constructs a scene according to the scene description;

wherein the transmitting apparatus comprises:

an elementary stream (ES) processing means that transfers at least one ES, which conforms to at least one of a transmission line state and a request issued from the receiving apparatus,

a scene description processing means that transfers and modifies a scene description to conform to a corresponding quality of the at least one ES from the ES processing means by adjusting the properties assigned to the ES within the scene description, and

wherein the transmitting apparatus appends time information to the at least one ES and the scene description; and

wherein the receiving apparatus monitors the time information sent from the transmitting apparatus and detects a delay in transmission using the time information.

AAPA - AAPA does not remedy the deficiencies of Kalra because, like Kalra, AAPA only discloses a mechanism to modify the ESes to reduce bandwidth or bit-rate to account for the limitations of the client device.

Like Kalra, AAPA does not discuss the modification of the scene description to compensate for the changes to the ESes.

On the contrary, it is this very deficiency in the prior art that the present application seeks to remedy.

Kalra and AAPA perform largely the same functions, i.e., compressing or reducing media content based on existing conditions.

However, neither teaches or suggests modifying the scene itself to account for these changes.

Accordingly, neither provides the necessary motivation to modify a scene description based by adjusting the properties assigned to an ES within the scene description.

Instead, a combination of Kalra and AAPA would necessarily yield a system that is similar to what Kalra already does, i.e., produce and modify media streams based on user profiles and/or bandwidth.

This is because the problems and solutions provided by Kalra and AAPA are both very similar, in that both simply provide an adjusted media content.

However, neither teaches or suggests modifying a scene description to account for changes to the media stream.

Since even a combination of the relied upon references would still fail to yield the claimed invention, Appellant submits that a prima facie case of obviousness for claims 1 and 33 has not been presented.

Appellant also notes that the offered combination appears to be a (failed) attempt to reconstruct the claimed invention in hindsight, as there is no basis to combine Kalra and AAPA to produce the present claimed invention.

Claim 14 - Claim 14 is drawn to a data transmitting method for transmitting a scene description that describes at least one elementary stream (ES) used to construct a scene, and constructing the scene according to the scene description, comprising:

transmitting at least one ES, which conforms to at least one of a transmission line state and a request issued from the receiving side;

transmitting a scene description that conforms to the at least one ES;

appending time information to the transmitted scene description; and

monitoring the time information to detect delays in transmission using the time information.

AAPA - AAPA does not remedy the deficiencies of Kalra because, like Kalra, AAPA only discloses a mechanism to modify the ESes to reduce bandwidth or bit-rate to account for the limitations of the client device.

Like Kalra, AAPA does not discuss the modification of the scene description to compensate for the changes to the ESes.

On the contrary, it is this very deficiency in the prior art that the present application seeks to remedy.

Kalra and AAPA perform largely the same functions, i.e., compressing or reducing media content based on existing conditions.

However, neither teaches or suggests modifying the scene itself to account for these changes.

Accordingly, neither provides the necessary motivation to modify a scene description based by adjusting the properties assigned to an ES within the scene description.

Instead, a combination of Kalra and AAPA would necessarily yield a system that is similar to what Kalra already does, i.e., produce and modify media streams based on user profiles and/or bandwidth.

This is because the problems and solutions provided by Kalra and AAPA are both very similar, in that both simply provide an adjusted media content.

However, neither teaches or suggests modifying a scene description to account for changes to the media stream.

Since even a combination of the relied upon references would still fail to yield the claimed invention, Appellant submits that a prima facie case of obviousness for claims 1 and 33 has not been presented.

Appellant also notes that the offered combination appears to be a (failed) attempt to reconstruct the claimed invention in hindsight, as there is no basis to combine Kalra and AAPA to produce the present claimed invention.

Claims 27-30, 32, 35-39 - Claims 28-30, 32, 35-39 are dependent upon claim 27. Claim 27 is drawn to a data transmitting apparatus for transmitting a scene description that describes at least one elementary stream (ES) used to construct a scene, comprising:

an ES processing means that transfers at least one ES, which conforms to at least one of a transmission line state and a request issued from a receiving side;

a scene description processing means for transferring and modifying a scene description, in accordance with the at least one ES from the ES processing means, by adjusting the properties assigned to the ES within the scene description.

AAPA - AAPA does not remedy the deficiencies of Kalra because, like Kalra, AAPA only discloses a mechanism to modify the ESes to reduce bandwidth or bit-rate to account for the limitations of the client device.

Like Kalra, AAPA does not discuss the modification of the scene description to compensate for the changes to the ESes.

On the contrary, it is this very deficiency in the prior art that the present application seeks to remedy.

Kalra and AAPA perform largely the same functions, i.e., compressing or reducing media content based on existing conditions.

However, neither teaches or suggests modifying the scene itself to account for these changes.

Accordingly, neither provides the necessary motivation to modify a scene description based by adjusting the properties assigned to an ES within the scene description.

Instead, a combination of Kalra and AAPA would necessarily yield a system that is similar to what Kalra already does, i.e., produce and modify media streams based on user profiles and/or bandwidth.

This is because the problems and solutions provided by Kalra and AAPA are both very similar, in that both simply provide an adjusted media content.

However, neither teaches or suggests modifying a scene description to account for changes to the media stream.

Since even a combination of the relied upon references would still fail to yield the claimed invention, Appellant submits that a prima facie case of obviousness for claims 1 and 33 has not been presented.

Appellant also notes that the offered combination appears to be a (failed) attempt to reconstruct the claimed invention in hindsight, as there is no basis to combine Kalra and AAPA to produce the present claimed invention.

Claim 33 - Claim 33 is drawn to a data transmitting apparatus according to Claim 27, further comprising:

wherein the scene description processing means transfers a scene description that specifies whether the at least one ES is to be used to construct a scene are used or not.

AAPA - AAPA, like Kalra, does not address the removal of elements from a scene description. AAPA only discloses the reduction or compression of the size of the ESes used in a scene, not changing the scene description based on the ES changes.

Since neither reference teaches or suggests the removal of elements from a scene only compression of elements, this feature is not obvious in view of the references.

Accordingly, Kalra and AAPA fail to teach or suggest all the features of claim 33.

Claim 34 is drawn to a data transmitting apparatus according to Claim 27, wherein the scene description processing means transfers a scene description whose complexity conforms to the at least one ES.

AAPA - AAPA, like Kalra, does not teach or suggest having the complexity of the scene description depend or conform to the complexity of an ES. Instead, both Kalra and AAPA simply address the compression of various elements of the VRML format and ESes, respectively. Neither reference makes the connection that the scene itself would benefit from modification as a result of the changes brought on by compression of the video or image content.

Accordingly, Kalra and AAPA fail to teach or suggest all the features of claim 34.

Claim 40-43, 45, 48-52 - Claim 39-43, 45, 48-52 is dependent upon claim 40. Claim 40 is drawn to a data transmitting method for transmitting a scene description that

describes the properties of at least one elementary stream (ES) used to construct a scene, comprising:

transmitting at least one ES, which conforms to at least one of a transmission line state and a request issued from the receiving side;

transmitting a scene description in accordance with the corresponding quality of the at least one ES;

appending time information to at least one of the transmitted scene description and the at least one ES.

AAPA - AAPA does not remedy the deficiencies of Kalra because, like Kalra, AAPA only discloses a mechanism to modify the ESes to reduce bandwidth or bit-rate to account for the limitations of the client device.

Like Kalra, AAPA does not discuss the modification of the scene description to compensate for the changes to the ESes.

On the contrary, it is this very deficiency in the prior art that the present application seeks to remedy.

Kalra and AAPA perform largely the same functions, i.e., compressing or reducing media content based on existing conditions.

However, neither teaches or suggests modifying the scene itself to account for these changes.

Accordingly, neither provides the necessary motivation to modify a scene description based by adjusting the properties assigned to an ES within the scene description.

Instead, a combination of Kalra and AAPA would necessarily yield a system that is similar to what Kalra already does, i.e., produce and modify media streams based on user profiles and/or bandwidth.

This is because the problems and solutions provided by Kalra and AAPA are both very similar, in that both simply provide an adjusted media content.

However, neither teaches or suggests modifying a scene description to account for changes to the media stream.

Since even a combination of the relied upon references would still fail to yield the claimed invention, Appellant submits that a prima facie case of obviousness for claims 1 and 33 has not been presented.

Appellant also notes that the offered combination appears to be a (failed) attempt to reconstruct the claimed invention in hindsight, as there is no basis to combine Kalra and AAPA to produce the present claimed invention.

Claim 46 - Claim 46 a data transmitting method according to Claim 40, wherein the scene description specifies whether to use the at least one ES.

Claim 78 - Claim 78 is drawn to a data transmission system comprising:

a transmitting apparatus that transmits a scene description; and

a receiving apparatus that constructs a scene according to the scene description;

wherein the transmitting apparatus comprises:

a elementary signal (ES) processor that transfers at least one ES used to construct the scene, in accordance to the transmission capacity, and

a scene description processor that transmits a scene description and a time information, the scene description conforming to a transmission capacity, the transmission capacity being derived from at least one of a transmission line state, a request issued from the receiving apparatus, or known available resources of the receiving apparatus;

wherein the receiving apparatus monitors the time information sent from the transmitting apparatus to detect a delay in the transmission; and

wherein the scene description includes objects, the objects comprising at least one node and at least one signal used to construct the scene, each the node describing an object or a relationship between objects.

AAPA - AAPA does not remedy the deficiencies of Kalra because, like Kalra, AAPA only discloses a mechanism to modify the ESes to reduce bandwidth or bit-rate to account for the limitations of the client device.

Like Kalra, AAPA does not discuss the modification of the scene description to compensate for the changes to the ESes.

On the contrary, it is this very deficiency in the prior art that the present application seeks to remedy.

Kalra and AAPA perform largely the same functions, i.e., compressing or reducing media content based on existing conditions.

However, neither teaches or suggests modifying the scene itself to account for these changes.

Accordingly, neither provides the necessary motivation to modify a scene description based by adjusting the properties assigned to an ES within the scene description.

Instead, a combination of Kalra and AAPA would necessarily yield a system that is similar to what Kalra already does, i.e., produce and modify media streams based on user profiles and/or bandwidth.

This is because the problems and solutions provided by Kalra and AAPA are both very similar, in that both simply provide an adjusted media content.

However, neither teaches or suggests modifying a scene description to account for changes to the media stream.

Since even a combination of the relied upon references would still fail to yield the claimed invention, Appellant submits that a prima facie case of obviousness for claims 1 and 33 has not been presented.

Appellant also notes that the offered combination appears to be a (failed) attempt to reconstruct the claimed invention in hindsight, as there is no basis to combine Kalra and AAPA to produce the present claimed invention.

Claims 105-108, 116-120 - The Second Amendment After Final Action Under 37 C.F.R. 1.116 of January 8, 2009 includes the replacement of finally rejected claims 110 and 112-115 with newly added claims 116-120.

Claims 106-108, 116-120 are dependent upon claim 105. Claim 105 is drawn to a data receiving method for receiving a scene description that describes the properties of at least one elementary stream (ES) used to construct a scene, comprising:

receiving at least one ES, which conforms to at least one of a transmission line state and a request issued from a receiving side;

receiving a scene description in accordance with the corresponding quality of the at least one ES;

wherein time information is appended to at least one of the received scene description and the at least one ES.

AAPA - AAPA does not remedy the deficiencies of Kalra because, like Kalra, AAPA only discloses a mechanism to modify the ESes to reduce bandwidth or bit-rate to account for the limitations of the client device.

Like Kalra, AAPA does not discuss the modification of the scene description to compensate for the changes to the ESes.

On the contrary, it is this very deficiency in the prior art that the present application seeks to remedy.

Kalra and AAPA perform largely the same functions, i.e., compressing or reducing media content based on existing conditions.

However, neither teaches or suggests modifying the scene itself to account for these changes.

Accordingly, neither provides the necessary motivation to modify a scene description based by adjusting the properties assigned to an ES within the scene description.

Instead, a combination of Kalra and AAPA would necessarily yield a system that is similar to what Kalra already does, i.e., produce and modify media streams based on user profiles and/or bandwidth.

This is because the problems and solutions provided by Kalra and AAPA are both very similar, in that both simply provide an adjusted media content.

However, neither teaches or suggests modifying a scene description to account for changes to the media stream.

Since even a combination of the relied upon references would still fail to yield the claimed invention, Appellant submits that a prima facie case of obviousness for claims 1 and 33 has not been presented.

Appellant also notes that the offered combination appears to be a (failed) attempt to reconstruct the claimed invention in hindsight, as there is no basis to combine Kalra and AAPA to produce the present claimed invention.

Claim 109 - Claim 109 is drawn to a data receiving method according to Claim 105, wherein the scene description specifies whether to use the at least one ES.

Conclusion

The claims are considered allowable for the same reasons discussed above, as well as for the additional features they recite.

Reversal of the Examiner's decision is respectfully requested.

If any fee is required or any overpayment made, the Commissioner is hereby authorized to charge the fee or credit the overpayment to Deposit Account # 18-0013.

Dated: July 16, 2009

Respectfully submitted,

By 

Christopher M. Tobin

Registration No.: 40,290

RADER, FISHMAN & GRAUER PLLC

Correspondence Customer Number: 23353

Attorneys for Applicant

CLAIMS APPENDIX

1. A data transmission system comprising:
a transmitting apparatus that transmits a scene description; and
a receiving apparatus that constructs a scene according to the scene description;
wherein the transmitting apparatus comprises:
an elementary stream (ES) processing means that transfers at least one
ES, which conforms to at least one of a transmission line state and a request
issued from the receiving apparatus,
a scene description processing means that transfers and modifies a
scene description to conform to a corresponding quality of the at least one ES
from the ES processing means by adjusting the properties assigned to the ES
within the scene description, and
wherein the transmitting apparatus appends time information to the at least one ES
and the scene description; and
wherein the receiving apparatus monitors the time information sent from the
transmitting apparatus and detects a delay in transmission using the time information.

2-13. (Cancelled)

14. A data transmitting method for transmitting a scene description that describes at
least one elementary stream (ES) used to construct a scene, and constructing the scene
according to the scene description, comprising:

transmitting at least one ES, which conforms to at least one of a transmission line
state and a request issued from the receiving side;
transmitting a scene description that conforms to the at least one ES;
appending time information to the transmitted scene description; and
monitoring the time information to detect delays in transmission using the time
information.

15-26. (Cancelled)

27. A data transmitting apparatus for transmitting a scene description that describes at least one elementary stream (ES) used to construct a scene, comprising:

an ES processing means that transfers at least one ES, which conforms to at least one of a transmission line state and a request issued from a receiving side;

a scene description processing means for transferring and modifying a scene description, in accordance with the at least one ES from the ES processing means, by adjusting the properties assigned to the ES within the scene description.

28. A data transmitting apparatus according to Claim 27, further comprising:

a memory means in which a plurality of predefined scene descriptions are stored corresponding to a plurality of possible qualities of the at least one ES;

wherein the scene description processing means selects the scene description from among the plurality of scene descriptions stored in the memory means, and transmits the said scene description.

29. A data transmitting apparatus according to Claim 27, further comprising:

a memory means in which at least one predefined scene description is stored;

wherein the scene description processing means converts a predefined scene description read from the memory means into the scene description based on the corresponding quality of the at least one ES, and transfers the scene description.

30. A data transmitting apparatus according to Claim 27, wherein the scene description processing means encodes the scene description and transmits the scene description.

31. (Cancelled)

32. A data transmitting apparatus according to Claim 27

wherein the scene description processing means transfers the scene description, which comprises information necessary for the receiving side to decode the at least one ES from the ES processing means.

33. A data transmitting apparatus according to Claim 27, further comprising:
wherein the scene description processing means transfers a scene description that specifies whether the at least one ES is to be used to construct a scene are used or not.

34. A data transmitting apparatus according to Claim 27, wherein the scene description processing means transfers a scene description whose complexity conforms to the at least one ES.

35. A data transmitting apparatus according to Claim 34, wherein the scene description processing means transfers a scene description, wherein a first scene part within a scene is replaced with a second scene part whose complexity is different from the complexity of the first scene part, in accordance with the at least one ES.

36. A data transmitting apparatus according to Claim 34, wherein the scene description processing means transfers a scene description, in which a scene part within a scene is removed or a new scene part is added to the scene, in accordance with the at least one ES.

37. A data transmitting apparatus according to Claim 34, wherein the scene description processing means modifies a quantization step, in which a scene description is encoded, in accordance with the at least one of the transmission line state, the request issued from the receiving side, and the at least one ES.

38. A data transmitting apparatus according to Claim 27, wherein the scene description processing means divides a scene description into a plurality of decoding units in accordance with the at least one of the transmission line state, the request issued from the receiving side, and the at least one ES.

39. A data transmitting apparatus according to Claim 38, wherein the scene description processing means adjusts a time interval between time instants at which the receiving side decodes each of the plurality of decoding units into which a scene description is divided.

40. A data transmitting method for transmitting a scene description that describes the properties of at least one elementary stream (ES) used to construct a scene, comprising:

- transmitting at least one ES, which conforms to at least one of a transmission line state and a request issued from the receiving side;
- transmitting a scene description in accordance with the corresponding quality of the at least one ES;
- appending time information to at least one of the transmitted scene description and the at least one ES.

41. A data transmitting method according to Claim 40, further comprising:

- storing a plurality of predefined scene descriptions corresponding to a plurality of possible qualities of the at least one ES; and
- selecting the scene description from among the plurality of scene descriptions.

42. A data transmitting method according to Claim 40, further comprising:

- storing at least one predefined scene description; and
- converting a predefined scene description into another scene description corresponding to the quality of the at least one ES.

43. A data transmitting method according to Claim 40, further comprising encoding the scene description.

44. (Cancelled)

45. A data transmitting method according to Claim 40,

- wherein the scene description further comprises information necessary for the receiving side to decode the at least on ES.

46. A data transmitting method according to Claim 40,

- wherein the scene description specifies whether to use the at least one ES.

47. (Cancelled)

48. A data transmitting method according to Claim 40, further comprising a first scene part within a scene with a second scene part, whose complexity differs from the complexity of the first scene part, in accordance with the at least one ES.

49. A data transmitting method according to Claim 40, further comprising modifying the scene description, by removing a scene part within a scene or adding a new part to the scene, in accordance with the at least one ES.

50. A data transmitting method according to Claim 40, further comprising modifying a scene description encoding step in accordance with a quantization step in accordance with the at least one of the transmission line state, the request issued from the receiving side, and the at least one ES.

51. A data transmitting method according to Claim 40, further comprising dividing the scene description into a plurality of decoding units in accordance with at least one of the transmission line state, the request issued from the receiving side, and the at least one ES.

52. A data transmitting method according to Claim 51, comprising adjusting the division step in accordance with a time interval between time instants at which a receiving side decodes each of the plurality of decoding units.

53-77. (Cancelled)

78. A data transmission system comprising:

a transmitting apparatus that transmits a scene description; and

a receiving apparatus that constructs a scene according to the scene description;

wherein the transmitting apparatus comprises:

a elementary signal (ES) processor that transfers at least one ES used to construct the scene, in accordance to the transmission capacity, and

a scene description processor that transmits a scene description and a time information, the scene description conforming to a transmission capacity, the transmission capacity being derived from at least one of a transmission line state, a request issued from the receiving apparatus, or known available resources of the receiving apparatus;

wherein the receiving apparatus monitors the time information sent from the transmitting apparatus to detect a delay in the transmission; and

wherein the scene description includes objects, the objects comprising at least one node and at least one signal used to construct the scene, each the node describing an object or a relationship between objects.

79-94. (Cancelled)

95. A data receiving apparatus for receiving a scene description that describes at least one elementary stream (ES) used to construct a scene, comprising:

an ES decoding unit that receives at least one ES, which conforms to at least one of a transmission line state and a request issued from the data receiving apparatus;

a scene description decoding unit for constructing a scene description, in which the properties assigned to the ES within the scene description conform to the at least one ES.

96. A data receiving apparatus according to Claim 95, wherein the scene description is transmitted from a server side which includes a scene description processing unit that selects the scene description from among the plurality of scene descriptions stored in a memory, and transmits the scene description.

97. A data receiving apparatus according to Claim 95, wherein the scene description is transmitted from a server side which converts a predefined scene description read from a memory into the scene description based on the corresponding quality of the at least one ES, and transmits the scene description.

98. A data receiving apparatus according to Claim 95, wherein the scene description specifies whether the at least one ES is to be used to construct the scene.

99. A data receiving apparatus according to Claim 95, wherein the scene description complexity conforms to the at least one ES.

100. A data receiving apparatus according to Claim 99, wherein the scene decoding unit receives a scene description, wherein a first scene part within a scene is replaced with a second scene part whose complexity is different from the complexity of the first scene part, in accordance with the at least one ES.

101. A data receiving apparatus according to Claim 99, wherein the scene description decoding unit receives a scene description, in which a scene part within a scene is removed or a new scene part is added to the scene, in accordance with the at least one ES .

102. A data receiving apparatus according to Claim 99, wherein the scene description is received in portions encoded based on a quantization step, in accordance with the at least one of the transmission line state, a request issued from the data receiving apparatus, and the at least one ES.

103. A data receiving apparatus according to Claim 95, wherein the scene description is received in a plurality of divided parts encoded by a transmitting apparatus in accordance with the at least one of the transmission line state, the request issued from the receiving side, and the at least one ES.

104. A data receiving apparatus according to Claim 103, wherein the scene transmitting apparatus adjusts a time interval between time instants at which the data receiving apparatus decodes each of the plurality of divided parts into which the scene description is divided.

105. A data receiving method for receiving a scene description that describes the properties of at least one elementary stream (ES) used to construct a scene, comprising:

receiving at least one ES, which conforms to at least one of a transmission line state and a request issued from a receiving side;

receiving a scene description in accordance with the corresponding quality of the at least one ES;

wherein time information is appended to at least one of the received scene description and the at least one ES.

106. A data receiving method according to Claim 105, wherein the scene description is selected from among a plurality of predefined scene descriptions corresponding to a plurality of possible qualities of the at least one ES.

107. A data receiving method according to Claim 105, wherein the scene description is created by converting a predefined scene description based on the corresponding quality of the at least one ES.

108. A data receiving method according to Claim 105, wherein the scene description further comprises information necessary for the receiving side to decode the at least one ES.

109. A data receiving method according to Claim 105, wherein the scene description specifies whether to use the at least one ES.

110-115. (Canceled)

116. A data receiving method according to Claim 105, wherein in the scene description, a first scene part is replaced with a second scene part, whose complexity differs from the complexity of the first scene part, in accordance with the at least one ES .

117. A data receiving method according to Claim 105, wherein in the scene description, a scene part is removed or added, in accordance with the at least one ES .

118. A data receiving method according to Claim 105, wherein the scene description is encoded in a quantization step, in accordance with the at least one of the transmission line state, the request issued from the receiving side, and the at least one ES.

119. A data receiving method according to Claim 105, wherein the scene description is divided into a plurality of decoding units in accordance with at least one of the transmission line state, the request issued from the receiving side, and the at least one ES.

120. A data receiving method according to Claim 119, wherein the scene description is divided in accordance with a time interval between time instants at which a receiving side decodes each of the plurality of decoding units.

EVIDENCE APPENDIX

There is no other evidence which will directly affect or have a bearing on the Board's decision in this appeal.

RELATED PROCEEDINGS APPENDIX

There are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.